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NATIONAL MARINE FISHERIES SERVICE
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CRUISE RESULTS
Atka Mackerel Tag Recovery Cruise
Cruise 2000-01
F/V *SEAFISHER*
September 21-29, 2000

The Resource Assessment and Conservation Engineering (RACE) and Resource Ecology and Fisheries Management (REFM) of the Alaska Fisheries Science Center conducted an Atka Mackerel tagging recovery study aboard the F/V *Seafisher* in Seguam Pass from September 21-29, 2000.

OBJECTIVES

The principal objectives of the cruise were to:

1. gather information on Atka Mackerel movement between areas open and closed to the commercial fishery using tag release and recovery methods;

2. recover Atka Mackerel tagged with environmental archival tags;

3. recover environmental monitoring buoys deployed in Seguam Pass during a previous Atka Mackerel tagging cruise (July-August 2000); and

4. estimate Atka Mackerel abundance in Seguam Pass using tag release and recovery methods.

METHODS

We began the Atka Mackerel Tag Recovery Cruise aboard the F/V *Seafisher* from Adak, Alaska on September 21, 2000. We proceeded to Seguam Pass and began fishing on September 22, 2000. Trawling was conducted in four designated areas between Seguam Island and Amlia

Island in areas where Atka Mackerel were released in August of 1999 and 2000 (between long. 172°W and 173°W). The four areas proceeded from west to east through Seguam pass with Area 1 (173°00'W-172°46'W), Area 2 (172°46'W-172°30'W), Area 3 (172°30'W-172°13'W), and Area 4 (172°13'W-172°00'W). North and south boundaries were roughly Seguam Island and the 200 meter contour to the north and the 200 meter depth contour to the south. The effort was randomly spread out over each area with most trawl locations being more than 2 nautical miles apart. We allowed the vessel's fishing master to select locations in the areas to trawl where we might find fish with the restriction of no more than 2 nautical mile trawl length and trawls must be several miles from each other. The entire catch was sampled for species composition, total catch weight, Atka Mackerel average weight, length frequency, and examined for tagged fish. We collected data on recovery efficiency by "seeding" hauls with 10 Atka Mackerel recently tagged with orange spaghetti tags. These fish were scattered in the live bin before, after, or during the cod end dumping of the catch to ensure they were randomly distributed in the bin. We attempted to recover current meters with crab pot riggings deployed during the August 2000 Atka Mackerel tagging charter.

RESULTS

The F/V *Seafisher* conducted 49 trawls in Seguam Pass catching over 467,000 Atka Mackerel as well as bycatch consisting of Pacific cod, Pacific halibut, northern rockfish, dusky rockfish, white blotched skate, Alaska skate, yellow irish lord, bigmouth sculpin, rock sole, arrowtooth and Kamchatka flounder and other incidental fishes and assorted sponges, corals and seastars. All Atka Mackerel were visually examined for orange spaghetti tags and electronic archival tags during the processing of the catch. Few Atka Mackerel were found in Area 3, therefore the effort and total catch taken was not evenly spread amongst the four areas. Approximately 160 mt of Atka Mackerel were taken in each of Areas 1, 2, & 4 and 58 mt was taken in Area 3.

We recovered 31 orange spaghetti tagged fish (3 possessing double tags). Nine spaghetti tags were recovered from Area 1, 6 from Area 2, 0 from Area 3, and 16 from Area 4. Of the 31 recaptured fish with spaghetti tags, four tags were released in 1999 and 27 were released in August of 2000. A single electronic archival tag was recovered from Area 4 which was released in this area on July 23 of 2000. Recovery rates for seeded tags ranged from 80-100% with an overall average of 95% of seeded tags recovered (34 hauls seeded).